

NUCLEAR REGULATORY COMMISSION**Notice of Availability of Model Application Concerning Technical Specifications Improvement Regarding Revision to the Control Rod Scram Time Testing Frequency in STS 3.1.4, "Control Rod Scram Times" for General Electric Boiling Water Reactors Using the Consolidated Line Item Improvement Process**

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of Availability.

SUMMARY: Notice is hereby given that the staff of the Nuclear Regulatory Commission (NRC) has prepared a model safety evaluation (SE), a model no significant hazards consideration (NSHC) determination, and a model license amendment application relating to a change in the Technical Specifications (TS) to extend the interval for the surveillance requirement (SR) in Standard Technical Specifications (STS) 3.1.4, "Control Rod Scram Times." The purpose of these models is to permit the NRC to efficiently process amendments that propose to incorporate this change into plant-specific TS. Licensees of nuclear power reactors to which the models apply may request amendments utilizing the model application.

DATES: The NRC staff issued a Federal Register Notice (69 FR 30339) on May 27, 2004, which proposed a model SE and a model NSHC determination related to changing plant TS to extend the control rod scram time testing interval from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in MODE 1." The NRC staff hereby announces that the enclosed model SE and NSHC determination may be referenced in plant-specific applications. The NRC staff has posted a model application on the NRC web site to assist licensees in using the consolidated line item improvement process (CLIIP) to incorporate this change. The NRC staff can most efficiently consider applications based upon the model application if the application is submitted within a year of this Federal Register Notice.

FOR FURTHER INFORMATION CONTACT: Bhalchandra Vaidya, Mail Stop: O-7D1, Division of Licensing Project Management, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, telephone (301) 415-3308, or William Reckley at (301) 415-1323.

SUPPLEMENTARY INFORMATION:

Background

Regulatory Issue Summary 2000-06, "Consolidated Line Item Improvement Process for Adopting Standard Technical Specifications Changes for Power Reactors," was issued on March 20, 2000. The CLIIP is intended to improve the efficiency of NRC licensing processes. This is accomplished by processing proposed changes to the STS in a manner that supports subsequent license amendment applications. The CLIIP includes an opportunity for the public to comment on proposed changes to the STS following a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. The CLIIP directs the NRC staff to evaluate any comments received for a proposed change to the STS and to either reconsider the change or to proceed with announcing the availability of the change for proposed adoption by licensees. Those licensees opting to apply for the subject change to TS are responsible for reviewing the staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Each amendment application made in response to the notice of availability will be processed and noticed in accordance with applicable rules and NRC procedures.

This notice involves changes to plant TS to extend the control rod scram time testing interval from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in MODE 1." This proposed change was proposed for incorporation into the STS by the industry's TS Task Force as TSTF-460, "Control Rod Scram Time Testing Frequency."

Applicability

This proposed change to extend the surveillance interval for control rod scram time testing is applicable to boiling water reactors (BWRs).

The CLIIP does not prevent licensees from requesting an alternative approach or proposing the changes without referencing the model SE and the NSHC. Variations from the approach recommended in this notice may, however, require additional review by the NRC staff and may increase the time and resources needed for the review.

Public Notices

In a notice in the Federal Register dated May 27, 2004 (69 FR 30339), the NRC staff requested comment on the use of the CLIIP for proposed changes to extend the control rod scram time testing interval as proposed in TSTF-460.

TSTF-460, as well as the NRC staff's SE and model application, may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records are accessible electronically from the ADAMS Public Library component on the NRC Web site, (the Electronic Reading Room).

The NRC staff received no formal comments from the request published in the Federal Register. Several editorial changes were identified to the staff and are reflected in the model safety evaluation included in this notice.

To efficiently process the incoming license amendment applications, the NRC staff requests each licensee applying for the changes addressed by TSTF-460 using the CLIIP to address the plant-specific information identified in the model SE. Namely, each licensee submitting amendments to extend the surveillance frequency should demonstrate the reliability of the control rod insertion system based on historical control rod scram time test data, and by

the more restrictive acceptance criterion for the number of slow rods allowed during at-power surveillance testing.

MODEL SAFETY EVALUATION

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

Consolidated Line Item Improvement

Technical Specification Task Force (TSTF) Change Traveler TSTF-460,

“Control Rod Scram Time Testing Frequency”

1.0 INTRODUCTION

By application dated [Date], [Licensee] (the licensee) requested changes to the Technical Specifications (TS) for [facility]. The proposed changes would revise TS testing frequency for the surveillance requirement (SR) in TS 3.1.4, "Control Rod Scram Times."

These changes are based on TS Task Force (TSTF) change traveler TSTF-460 (Revision 0) that has been approved generically for the boiling water reactor (BWR) Standard TS, NUREG-1433 (BWR/4) and NUREG-1434 (BWR/6) by revising the frequency of SR 3.1.4.2, control rod scram time testing, from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in MODE 1." A notice announcing the availability of this proposed TS change using the consolidated line item improvement process was published in the Federal Register on [DATE] (XX FR XXXXXX).

2.0 REGULATORY EVALUATION

The TS governing the control rod scram time surveillance is intended to assure proper function of control rod insertion. Following each refueling outage, all control rod scram times are verified. In addition, periodically during power operation, a representative sample of control rods is selected to be inserted to verify the insertion speed. A representative sample is defined

as a sample containing at least 10 percent of the total number of control rods. The current TS stipulates that no more than 20 percent of the control rods in this representative sample can be "slow" during the post outage testing. With more than 20 percent of the sample declared to be "slow" per the criteria in Table 3.1.4-1, additional control rods are tested until this 20 percent criterion (e.g., 20 percent of the entire sample size) is satisfied, or until the total number of "slow" control rods (throughout the core, from all surveillances) exceeds the Limiting Condition for Operation limit. For planned testing, the control rods selected for the sample should be different for each test. The acceptance criterion for at-power surveillance testing has been redefined from 20 percent to 7.5 percent. This tightened acceptance criterion for at-power surveillance aligns with the TS 3.1.4 requirement for the total control rods allowed to have scram times exceeding the specified limit.

The proposed change does not affect any current operability requirements and the test frequency being revised is not specified in regulations. As a result, no regulatory requirements or criteria are affected.

3.0 TECHNICAL EVALUATION

3.1 Statement of Proposed Changes

NUREG-1433, SR 3.1.4.2 states, "Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure \geq [800] psig." NUREG-1434, SR 3.1.4.2 states, "Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure \geq [950] psig." Both SRs have a frequency of "120 days cumulative operation in MODE 1." The proposed change revises the frequency to "200 days cumulative operation in MODE 1." The Bases are revised to reference the new frequency and to reduce the percentage of the tested rods which can be "slow" from 20 percent to 7.5 percent.

3.2 Evaluation of Proposed Change

The control rod insertion time test results at [Plant Name] have shown the control rod scram rates to be highly reliable. During the most recent [XXX] years of operation, out of [XXX] control rod insertion tests, only [XXX] control rods have been slower than the insertion time limit. The extensive historical database substantiates the claim of high reliability of the [Plant Name] control rod drive system. The current TS requires that 10 percent of the [XXX] control rods, or [XXX] rods, be tested via sampling every 120 cumulative days of operation in Mode 1.

The current TS states that the acceptance criteria have been met if 20 percent or fewer of the sample control rods that are tested are found to be slow. The acceptance criterion has been re-defined for at-power surveillance testing from 20 percent to 7.5 percent when the surveillance period is extended to 200 cumulative days of operation in Mode 1. This tightened acceptance criterion for at-power surveillance aligns with the TS 3.1.4 requirement for the total control rods allowed to have scram times exceeding the specified limit.

The licensee will incorporate the revised acceptance criterion value of 7.5 percent into the TS Bases in accordance with their Bases Control Program and as a condition of this license amendment¹.

The NRC staff considers the extended surveillance interval to be justified by the demonstrated reliability of the control rod insertion system, based on historical control rod scram time test data, and by the more restrictive acceptance criterion for the number of slow

¹ Conditioning of the license amendment is accomplished by including wording similar to the following in the implementation language (typically included as item 3) in the Amendment of Facility Operating License:

This license amendment is effective as of its date of issuance and shall be implemented within [XX] days from the date of issuance. The licensee shall incorporate during the next periodic update into the TS Bases Section the changes described in its application dated [Date].

rods allowed during at-power surveillance testing. The NRC staff finds the proposed TS change acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the [State] State official was notified of the proposed issuance of the amendments. The State official had [choose one: (1) no comments, or (2) the following comments - with subsequent disposition by the staff].

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (XX FR XXXXX). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that:

(1) there is reasonable assurance that the health and safety of the public will not be endangered by the operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Model Proposed No Significant Hazards Consideration Determination

Description of Amendment Request: The proposed amendment changes the Technical Specification (TS) testing frequency for the surveillance requirement (SR) in TS 3.1.4, "Control Rod Scram Times." The proposed change revises the test frequency of SR 3.1.4.2, control rod scram time testing, from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in Mode 1."

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), an analysis of the issue of no significant hazards consideration is presented below:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change extends the frequency for testing control rod scram time testing from every 120 days of cumulative Mode 1 operation to 200 days of cumulative Mode 1 operation. The frequency of surveillance testing is not an initiator of any accident previously evaluated. The frequency of surveillance testing does not affect the ability to mitigate any accident previously evaluated, as the tested component is still required to be operable. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change extends the frequency for testing control rod scram time testing from every 120 days of cumulative Mode 1 operation to 200 days of cumulative Mode 1

operation. The proposed change does not result in any new or different modes of plant operation. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change extends the frequency for testing control rod scram time testing from every 120 days of cumulative Mode 1 operation to 200 days of cumulative Mode 1 operation. The proposed change continues to test the control rod scram time to ensure the assumptions in the safety analysis are protected. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

Dated at Rockville, Maryland, this 16th day of August 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William D. Reckley, Chief (Acting), Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change extends the frequency for testing control rod scram time testing from every 120 days of cumulative Mode 1 operation to 200 days of cumulative Mode 1 operation. The proposed change continues to test the control rod scram time to ensure the assumptions in the safety analysis are protected. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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Dated at Rockville, Maryland, this 16th day of August 2004.

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